PRIVACY, LIBERTY, PROPERTY, AND THE GENETIC MODIFICATION OF HUMANS

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ABSTRACT: Can one's genetic profile be owned? How about techniques to improve genetic profiles? A brave new world of genetic enhancement is upon us and we'd better be ready to answer such questions. Adam Moore is ready. He thinks the answers to these questions are resoundingly "yes." He defends this on the ground of individual liberty in the face of potential government control of such technology. He argues that genetic property is to be assimilated to rights of privacy and property in general and can be owned. He defends this against several important objections on the basis of societal overriding needs or goods.

> Each new advance in . . . technology . . . disturbs a status quo. It meets resistance from those whose domain it threatens, but if useful, it begins to be adopted.
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> —Ithiel de Sola Pool, *Technologies of Freedom*

INTRODUCTION

In recent years the ethical issues surrounding genetic enhancement, gene therapy, cloning, and privacy rights have been hotly debated. With the human genome project accelerating and the advancement of gene therapy we stand on the cusp of a brave new world. In the near future it will be possible to alter one's own genetic profile—maybe a change of eye color or a loss of weight. It may also be possible to affect the genetic make-up of future generations. For instance we may be able to banish diabetes and similar diseases from the human genome.

The ethical, political, and social ramifications of this bio-technological movement are profound and have alarmed many. "Messing with the human genome," some claim, "is playing God." Others conjure visions of clone farms, organ banks, and a world where individual distinctiveness has given way to near identical, near

perfect, robot-like beings. Some argue that even if good may come from this tampering with nature it will most likely only affect the rich or those who can pay for gene therapy. The general mood of most leaders and scholars with respect to these issues is one of caution.

In this paper I will argue that intangible property of this sort can be owned—that the proper subjects of intangible property claims include medical records, genetic profiles, and gene enhancement techniques. Coupled with a right to privacy, these intangible property rights allow individuals a zone of control that will, in most cases, justifiably exclude governmental or societal invasions into private domains. I will argue that the threshold for overriding privacy rights and intangible property rights is higher, in relation to genetic enhancement techniques and sensitive personal information, than is commonly suggested. Once the bar is raised, so-to-speak, the burden of overriding it is formidable. In the end, I am not so worried about the prospects of a brave new world brought upon us by gene manipulation—I am much more worried when societies, committees, and concerned citizens use the force of government to tell us what we can do to and in our own bodies.

JUSTIFYING INTANGIBLE PROPERTY RIGHTS[1]

We may begin by asking how property rights to unowned objects are generated. This is known as the problem of original acquisition and a common response is given by John Locke. "For this labor being the unquestionable property of the laborer, no man but he can have a right to what that is once joined to, at least where there is *enough and as good left for others*."[2] So long as the proviso that "enough and as good" is satisfied, an acquisition is of prejudice to no one.

Suppose that mixing one's labor with an unowned object creates a prima facie claim against others not to interfere that can only be overridden by a comparable claim. The role of the proviso is to provide one possible set of conditions where the prima facie claim remains undefeated.[3] Another way of stating this position is that the proviso in addition to X, where X is labor or first occupancy or some other weak claim generating activity, provides a sufficient condition for original appropriation.

Justification for the view that labor or possession may generate prima facie claims against others could proceed along several lines. First, labor, intellectual effort, and creation are generally voluntary activities that can be unpleasant, exhilarating, and everything in-between. That we voluntarily do these things as sovereign moral agents may be enough to warrant non-interference claims against others. A second, and possibly related justification, is based on desert. Sometimes individuals who voluntarily do or fail to do certain things deserve some outcome or other. Thus, students may deserve high honor grades and criminals may deserve punishment. When notions of desert are evoked, claims and obligations are made against others—these non-absolute claims and obligations are generated by what individuals do or fail to do. Thus in fairly uncontroversial cases of desert, we are willing to acknowledge that weak claims are generated, and if desert can properly attach to labor or creation, then claims may be generated in these cases as well.

Finally, a justification for the view that labor or possession may generate prima facie claims against others could be grounded in respect for individual autonomy and sovereignty. As sovereign and autonomous agents, especially within the liberal tradition, we are afforded the moral and legal space to order our lives as we see fit. As long as respect for others is maintained we are each free to set the course and direction of our own lives, to choose between various lifelong goals and projects, and to develop our capacities and talents accordingly. Simple respect for individuals would prohibit wresting from their hands an unowned object that they acquired or produced. I hasten to add that at this point we are trying to justify weak non-interference claims, not full blown property rights. Other things being equal, when an individual labors to create an intangible work, then weak presumptive claims of non-interference have been generated on grounds of labor, desert, or autonomy.

The underlying rationale of Locke's proviso is that if no one's situation is worsened, then no one can complain about another individual appropriating part of the commons. If no one is harmed by an acquisition and one person is bettered, then the acquisition ought to be permitted. In fact, it is precisely because no one is harmed that it seems unreasonable to object to a Pareto superior move. Thus, the proviso can be understood as a version of a "no harm, no foul" principle.

Bettering, Worsening, and the Baseline Problem

Assuming a just initial position and that Pareto superior moves are legitimate, there are two questions to consider when examining a Pareto based proviso. First, what are the terms of being worsened? This is a question of scale, measurement, or value. An individual could be worsened in terms of subjective preference satisfaction, wealth, happiness, freedoms, opportunities, et cetera. Which of these count in determining bettering and worsening? Second, once the terms of being worsened have been resolved, which two situations are we going to compare to determine if someone has been worsened. Is the question one of how others are now, after my appropriation, compared to how they would have been were I absent, or if I had not appropriated, or some other state? Here we are trying to answer the question "Worsened relevant to what?" This is known as the baseline problem.

In principle, the Lockean theory of intangible property being developed is consistent with a wide range of value theories. So long as the preferred value theory has the resources to determine bettering and worsening with reference to acquisitions, then Pareto superior moves can be made and acquisitions justified on Lockean grounds. For now, assume an Aristotelian eudaimonist account of value exhibited by the following theses is correct.[4]

1. Human well-being or flourishing is the sole standard of intrinsic value.
2. Human persons are rational project pursuers, and well-being or flourishing is attained through the setting, pursuing, and completion of life goals and projects.
3. The control of physical and intangible objects is valuable. At a specific time each individual has a certain set of things she can freely use and other things

> she owns, but she also has certain opportunities to use and appropriate things. This complex set of opportunities along with what she can now freely use or has rights over constitutes her position materially—this set constitutes her level of material well-being.

While it is certainly the case that there is more to bettering and worsening than an individual's level of material well being, including opportunity costs, I will not pursue this matter further at present. Needless to say, a full-blown account of value will explicate all the ways in which individuals can be bettered and worsened with reference to acquisition. Moreover, as noted before, it is not crucial to the Lockean model being presented to defend some preferred theory of value against all comers. Whatever value theory that is ultimately correct, if it has the ability to determine bettering and worsening with reference to acquisitions, then Pareto-superior moves can be made and acquisitions justified on Lockean grounds.

Lockeans as well as others who seek to ground rights to property in the proviso generally set the baseline of comparison as the state of nature. The commons, or the state of nature, is characterized as that state where the moral landscape has yet to be changed by formal property relations.

For now, assume a state of nature situation where no injustice has occurred and where there are no property relations in terms of use, possession, or rights. All anyone has in this initial state are opportunities to increase her material standing. Suppose Fred creates an intangible work and does not worsen his fellows—alas, all they had were contingent opportunities and Fred's creation and exclusion adequately benefits them in other ways. After the acquisition, Fred's level of material well-being has changed. Now he has a possession that he holds legitimately, as well as all of his previous opportunities. Along comes Ginger who creates her own intangible work and considers whether her exclusion of it will worsen Fred. But what two situations should Ginger compare? Should the acquisitive case (Ginger's acquisition) be compared to Fred's initial state, where he had not yet legitimately acquired anything, or to his situation immediately before Ginger's taking? If bettering and worsening are to be cashed out in terms of an individual's level of well being with opportunity costs and this measure changes over time, then the baseline of comparison must also change. In the current case we compare Fred's level of material well-being when Ginger possesses and excludes an intangible work to his level of well-being immediately before Ginger's acquisition.

A slightly different way to put the Lockean argument for intellectual property rights is:

> Step One: *The Generation of Prima Facie Claims to Control*—Suppose Ginger creates a new intangible work (a poem perhaps). Creation, effort, etc., yield her prima facie claims to control (similar to student desert for a grade).
>
> Step Two: *Locke's Proviso*—If the acquisition of an intangible object makes no one (else) worse off in terms of their level of well-being compared to how they were immediately before the acquisition, then the taking is permitted.

Step Three: *From Prima Facie Claims to Property Rights*—When are prima facie claims to control an intangible work undefeated? Answer: when the proviso is satisfied. Alas, no one else has been worsened—who could complain?

Conclusion: So long as no harm is done (the proviso is satisfied), the prima facie claims that labor and effort may generate turn into property claims. [5]

If correct, this account justifies rights to control intangible property like genetic enhancement techniques. When an individual creates or compiles an intangible work and fixes it in some fashion, then labor and possession create a prima facie claim to the work. Moreover, if the proviso is satisfied the prima facie claim remains undefeated and rights are generated.

PRIVACY RIGHTS

Privacy has been defined in many ways over the last century. Warren and Brandeis called it "the right to be let alone."[6] Pound and Freund have defined privacy in terms of an extension of personality or personhood.[7] Westin and others including myself have cashed out privacy in terms of information control.[8] Still others have insisted that privacy consists of a form of autonomy over personal matters.[9] Parent offers a purely descriptive account of privacy—"Privacy is the condition of not having undocumented personal knowledge about one possessed by others."[10] Finally, with all of these competing conceptions of privacy some have argued that there is no overarching concept of privacy but rather several distinct core notions that have been lumped together.

A right to privacy can be understood as a right to maintain a certain level of control over the inner spheres of personal information. It is a right to limit public access to the "core self"—personal information that one never discloses—and to information that one discloses only to family and friends. For example, suppose that I wear a glove because I am ashamed of a scar on my hand. If you were to snatch the glove away you would not only be violating my right to property—alas the glove is mine to control—you would also violate my right to privacy; a right to restrict access to information about the scar on my hand. Similarly, if you were to focus your x-ray camera on my hand, take a picture of the scar through the glove, and then publish the photograph widely, you would violate a right to privacy.

Having said something about what a right to privacy is we may ask how such rights are justified. A promising line of argument combines notions of autonomy and respect for persons. A central and guiding principle of western liberal democracies is that individuals, within certain limits, may set and pursue their own life goals and projects. Rights to privacy erect a moral boundary that allows individuals the moral space to order their lives as they see fit. Privacy protects us from the prying eyes and ears of governments, corporations, and neighbors. Within the walls of privacy we may experiment with new ways of living that may not be accepted by the majority. Privacy, autonomy, and sovereignty, it would seem come bundled together.

A second but related line of argument rests on the claim that privacy rights stand as a bulwark against governmental oppression and totalitarian regimes. If individuals have rights to control personal information and to limit access to themselves, within certain constraints, then the kinds of oppression that we have witnessed in the twentieth century would be nearly impossible. Put another way, if oppressive regimes are to consolidate and maintain power, then privacy rights (broadly defined) must be eliminated or severely restricted. If correct, privacy rights would be a core value that limited the forces of oppression.[11]

If I am correct about all of this, then there is a fairly strong presumption in favor of individual privacy rights. What justifies a photographer taking pictures of me about the house or a news agency publishing sensitive medical information about me is my consent. Most would agree that absent such consent a serious violation of privacy would have occurred.

To briefly summarize the first two sections, I think it is plausible to maintain that intangible works, like genetic enhancement techniques, can be owned and that there is a fairly strong presumption in favor of individual privacy. Nevertheless, intangible property rights and privacy rights are not absolute. To take a simple example, my property right in a Louisville slugger does not allow me to swing it at your knees, nor can I throw it at your car. Property rights are generally limited by the rights of others. Furthermore, this restriction—call it the harm restriction—fits well with the Lockean model under consideration. The proviso, a no-harm no-foul rule, allows individuals to acquire unowned goods. The harm restriction limits harmful uses of those goods.

A second constraint on what can be done with intangible works has to do with privacy and information control. Without your consent and independent of harm, I may not publish sensitive personal information about you on my website, use your image to promote an international product line, or listen in on your phone conversations. The question now becomes when, if ever, can these fairly strong presumptions, or rights, be overridden by other considerations.

PRIVACY, PROPERTY, AND GENETIC ENHANCEMENT TECHNIQUES

In this section I will consider several common arguments that purport to show how easily the property and privacy presumptions already established may be undermined. Please note that what follows is not an exhaustive examination of every point and counterpoint that may be offered with respect to these presumptions. My goal is simply to show that privacy rights and intangible property rights, once established, are not so easily swept aside as some might think. Thus many policy decisions that have been recently proposed or enacted—citywide audio and video surveillance, law enforcement DNA sweeps, genetic profiling, and national bans on genetic testing and enhancement of humans, to name a few—will have to be backed by very strong arguments.

Interference with Liberty and Privacy Argument

Let us begin with a fairly simple case. Suppose that Ginger has discovered the genetic markers for diabetes and has developed a gene therapy technique that will correct this condition. In fact her technique will eliminate the gene or combination of genes that cause diabetes in mature cells (somatic cells) as well as cells that may be passed on to one's offspring (germ line cells). Fred, who has been suffering from the complications of diabetes since childhood contacts Ginger and arranges to have genetic therapy. Moreover, suppose that Fred has privacy rights that allow him a certain kind of control over personal information and his body or capacities. Fred undergoes the procedure, pays Ginger, and forever alters the genetic profile of his descendants.

Given that Fred and Ginger could be members of any society or culture, and assuming that presumptive rights to privacy and intangible property ownership have been established, we have an immediate prima facie case against sweeping governmental or societal interference with this conduct. Ginger's love of science and desire to help others drives her to burn the midnight oil and produce a revolutionary new technique. Fred's right to privacy allows him, within certain constraints, to decide what happens to and in his body. It would seem that there are no grounds for third party interference in this case—nothing that would override the presumptive rights already in place.

Now if Fred and Ginger had conspired to change his genetic profile in such a way that caused his descendants *to have* childhood diabetes, then surely interference or sanctions are warranted (assuming, of course, that Fred is going to go on to father children). I would hope that such activity would fall under the umbrella of child protection laws. Those individuals who do things that endanger the health and well being of dependents will have sanctioned interferences with private domains and ownership. A similar example is the individual who is playing Russian roulette with someone who does not care to take part in this activity—surely this would bump against the harm restriction or a similar restriction; the "risk of great harm" restriction.

A few staunch defenders of religious freedom argue that fundamentalists should be able to adhere to certain rules even when doing so will cause a child to die. For example some religious views forbid blood transfusions while others may forbid access to medical doctors altogether. These practices are clear violations of the harm standard, and according to my view, may be justifiably prohibited. Moreover, those who disagree with me on this matter and with respect to genetic enhancement seem to stand on shaky ground—they will allow parents to harm their children by adhering to religious principles while forbidding other parents to help their children though genetic enhancement.

Top-down laws that seek to regulate genetic therapy will almost always interfere with individual liberty and privacy. Consider the case where Fred flies off to some foreign country to receive genetic therapy from Ginger. It is difficult to imagine how laws or similar kinds of regulation are going to prohibit this activity without also sanctioning severe violations of liberty and privacy.

Moreover, with better technology and less invasive techniques undergoing genetic therapy may become as simple as getting a shot. Here there is little ground to stand on between draconian laws that clearly cross into private domains and interfere with individual liberty or emasculated regulations that have little force. A ban on genetic testing in the United States will not prevent independent researchers in less regulated countries from this sort of experimentation. With the possibility of massive profits there will always be companies and universities eager to fund such projects.

While it may be the case that certain types of genetic enhancement are immoral it does not automatically follow that they should be regulated. There are many actions, both moral and immoral that arguably fall outside of the domain of societal regulation. Lying and helping the poor are two obvious examples.

Certainly there are types of actions that should be prohibited on grounds that they present an unjustifiable harm to others—these actions violate the harm restriction. Other actions or policies may be prohibited because they unjustifiably invade private domains. Genetically predisposing your offspring to live in pain or to grow a third arm, causing your child to become afflicted with cancer, poor eyesight, or diabetes, are all actions that prima facie warrant prosecution. Moreover, if there is evidence that someone is about to produce these harms then surely intervention is warranted. Put another way, property rights and privacy rights are justifiably overridden in these cases. But even if genetic harm is done to some child it may be possible to correct defects by modifying mature cells through somatic gene therapy.

None of this, however, sanctions a national database containing individual genetic profiles or outlawing somatic and germ line therapy simpliciter. The norms that guide us as to when and where it is appropriate to interfere with family life should guide us in genetic modification cases as well. If a parent takes action that will result in serious harm to his descendants, for example using genetic modification techniques to cause them to develop inoperable throat cancer, then the privacy presumption will have been overridden. Moreover, those who develop such enhancement techniques should be liable as well. While the threshold for overriding the presumptions of privacy and property is contentious, it is not as if we have to reinvent the wheel with each new advance in technology. Simply put, the arguments that establish a strong presumption in favor of privacy and property in the last two sections set a fairly high threshold for the justified violation of these rights. Happily, these claims generally accommodate current moral and legal norms.

In presenting these cases I hope to establish the futility of national, or even international, laws prohibiting gene enhancement in human subjects. Such laws are unenforceable and would almost certainly sanction unjustifiable interferences with individual liberty and privacy. Sending a child to a parochial school is a form of environmental enhancement that many find distasteful. Nevertheless, this activity is generally recognized as falling outside the domain of legitimate government

regulation. A father who incessantly pushes his child to become a tennis star may be doing something questionable from a moral point of view. Parents who teach their children to be intolerant or genetically predispose their offspring to grow seven feet tall may also be engaging in immoral behavior. It does not automatically follow that this type of behavior ought to be legally prohibited. We may continue to argue about the ethical status of particular kinds of genetic enhancement as we do about certain kinds of environmental enhancement. Nevertheless, I think that it is important to note the high threshold that must be passed for justifiable interference in private domains.

The Social Nature of Intangible Works

A common view about the information found in the human genome, one that may undermine property rights, is that this information is publicly owned—thus ownership claims to genetic enhancement techniques may be undermined. Even if this view were any good it would still not automatically sanction sweeping government regulations concerning genetic enhancement techniques.[12]

Property rights are justifiably limited because of the inherent social nature of intangible works. Individuals are raised in societies that endow them with knowledge which these individuals then use to create intangible works of all kinds. On this view the building blocks of intangible works—knowledge—is a social product. Individuals should not have exclusive ownership of the works that they create because these works are built upon the shared knowledge of society. Allowing rights to intangible works would be similar to granting ownership to the individual who placed the last brick in a public works dam. The dam is a social product, built up by the efforts of hundreds, and knowledge, upon which all intangible works are built, is built up in a similar fashion.

Similarly, the benefits of market interaction are social products. The individual who discovers crude oil in their backyard should not obtain the full market value of the find. The inventor who produces the next technology breakthrough does not deserve full market value when such value is actually created through the interactions of individuals within a society. Simply put, the value produced by markets and the building blocks of intangible works are social products. This would undermine any claims to clear title.[13]

This argument is deficient for several reasons. First, why think that societies can be *owed* something or that they can *own* or *deserve* something? Notions of *ownership*, *owing*, or *deserving* do not appear to make sense when attached to the concept of "society." If so and if different societies can *own* knowledge, do they not have the problem of original acquisition?[14] Surely, it does not follow from the claim that X is a social product that society owns X. Likewise, it does not follow from the claim that X is produced by Ginger, that Ginger owns X. It is true that interactions between individuals may produce increased market values or add to the common stock of knowledge. What I deny is that these by-products of interaction, market value, and shared information, are in some sense owned by society

or that society is owed for their use. Why assume this without argument? It is one thing to claim that information and knowledge is a social product—something built up by thousands of individual contributions—but quite another to claim that this knowledge is owned by society or that individuals who use this information owe society something in return.[15]

Suppose that Fred and Ginger, along with numerous others, interact and benefit me in the following way. Their interaction produces knowledge that is then freely shared and allows me to create some new value, V. Upon creation of V, Fred and Ginger demand that they are owed something for their part. But what is the argument from third party benefits to demands of compensation for these benefits—why think that there are "strings" attached to *freely* shared information? If such an argument can be made, then it is plausible as well to maintain that burdens create reverse demands. Suppose that the interaction of Fred and Ginger produces false information that is freely shared. Suppose further that I waste ten years trying to produce some value based, in part, on this false information. Would Fred and Ginger, would society, owe me compensation? The position that "strings" are attached in this case runs parallel to Nozick's benefit "foisting" example. In Nozick's case a benefit is foisted on someone and then payment is demanded. This seems an accurate account of what is going on in this case as well.[16]

On my view common knowledge, market value, and the like, are the synergistic effects of individuals freely interacting. If a thousand of us *freely* give our new and original ideas to all of humankind it would be illicit for us to demand compensation, after the fact, from individuals who have used our ideas to create things of value. It would even be more questionable for individuals ten generations later to demand compensation for the use of, the now very old, ideas that we freely gave.[17]

Suppose for the sake of argument that the defender of this view can justify societal ownership of general pools of knowledge and information. Even in this case we have already paid for the use of this collective wisdom when we pay for education and the like. When a parent pays, through fees or taxation, for a child's education it would seem that the information—part of society's common pool of knowledge—has been fairly purchased. This extends through all levels of education and even to individuals who no longer attend school.

Finally, it is obviously the case that the information found in the human genome is discovered rather than created. These facts may be discovered by anyone who cares to look hard enough. The genetic enhancement techniques that will be built upon this information are created rather than discovered—alas, there may be infinitely many ways to modify human genetic structure. Thus, even if an argument could be marshaled that justified societal ownership of the information found in the human genome this would not automatically yield claims to control every subsequent invention based on this information. Thus, if I am correct, the social nature of intellectual works argument will not undermine intangible property rights to creations like genetic enhancement techniques.

The Inequality Argument

One argument commonly given against allowing individuals the liberty to undergo genetic enhancement procedures is that such technology is expensive and will only impact the rich. Those with the financial resources will genetically engineer their offspring to eliminate defects while the poor will be left what nature gives them by chance. This inequality in health care will lead to further economic and social inequalities. It may also lead to longer more healthier lives for some, ultimately creating a class based society and discrimination against those who are genetically challenged.

This view is subject to several decisive objections. Almost every medical advancement at its beginning was available only to the rich. By refining these advancements and techniques prices dropped which opened up new markets for those less financially fortunate. In the end, procedures that were once cost prohibitive are now available to everyone. There is no reason to think that genetic enhancement procedures will not follow this same course. In fact our entire market system seems to necessitate this kind of inequality. Most inventors and companies burn the midnight oil and create or discover new and revolutionary medical procedures in order to make a profit. This process requires large up front investments that in turn necessitate higher initial prices when a viable commodity does come to market. Nevertheless sooner or later the "high priced" market becomes saturated and in order to maintain profits prices are dropped. If this system yields everyone better prospects in the end, the resulting initial inequality of distribution is hardly objectionable.

Moreover, even if gene therapy techniques remain expensive, the leveling effect assumed in the inequality argument seems indefensible. Suppose that aspirin-plus is invented and cures headaches and colds with great efficiency. The cost of aspirin-plus, however, is very high—suppose $500 per pill. Are we to prohibit the manufacture and administration of aspirin-plus because it is unfair that some will be able to forgo the suffering bought on by colds and headaches while others will not? This sounds like simple envy and mean spiritedness to me—"if I can't have it, then no one can" or "if I have to suffer, then so does everyone else." Let us dispense with the notion that individuals who hold these sentiments are actually concerned with lessening human suffering.

Now, it might be argued that my aspirin-plus case and the social ramifications of allowing genetic enhancement to proliferate are wildly divergent. Curing headaches and colds does not impact an individual's entire life in the way that genetic manipulation does. But here again we bump against other forms of enhancement—teaching your child to read, learning to play chess, going to college, playing sports, nurturing musical abilities, developing the virtue of self-control—that it would seem illicit to legally prohibit even though they each impact an individual's entire life. Many of these examples are purposely ambiguous in that they may be things we do to ourselves or things that we do to others. Few would deny that parents who create environments that produce these characteristics should be stopped. What if these enhancements could be genetically produced—why would environmental enhancement or manipulation

be permitted yet the genetic based counterpart be prohibited? One answer is that the former is temporary, ending with the life of the person involved, while the latter will be passed down to all subsequent generations. But this is clearly false given that environmental enhancements may be passed on to one's children and it is possible that genetic enhancements may be altered with somatic therapy.

One sort of reply to this view is given by The Council for Responsible Genetics which opposes germline modification unconditionally. "The cultural impact of treating humans as biologically perfectible artifacts would be entirely negative. People who fall short of some technically achievable ideal would be 'damaged goods.' And it is clear that the standards for what is genetically desirable will be those of society's economically and politically dominant groups. This will only reinforce prejudices and discrimination in a society where they already exist."[18] Obviously I disagree. There is no reason to think that gene modification of any sort will necessarily lead to "treating humans as biologically perfectible artifacts" or that those who do not live up to some ideal will be viewed as "damaged goods." Maybe genetically manipulated individuals will be labeled as "unnatural" rather than superior. Moreover, who would know if fairly strong rights to privacy are in place.

CONCLUSION

If I am correct, there is a fairly strong presumption in favor of privacy and intangible property rights that will limit the kinds of legislation that have recently been offered concerning genetic research and gene therapy. Furthermore, two commonly cited arguments, the social nature of intellectual works argument and the inequality argument, fail to justify overriding these rights. While there is much more to be said concerning these issues I would urge caution in a different direction and put the burden of proof in a different place. Let property rights and privacy rights stand in the absence of strong overriding reasons. In the end, it seems that we are headed toward a world that includes clone farms, organ banks, and genetic manipulation. If so, let us at least face this future with our basic rights of property and privacy intact.

ENDNOTES

This article is a shortened and modified version of "Owning Genetic Information and Gene Enhancement Techniques: Why Privacy and Property May Undermine Social Control of the Human Genome," *Bioethics*, Vol. 14 (Spring 2000): pp. 97–119. I would like to thank the editors at *Bioethics* for allowing me to present this material here. I would also like to thank Andrew Cohen, Bill Kline, Scott Rothwell, Mark VanHook, Don Hubin, Peter King, and Kimberly Moore for their comments and suggestions.

1. A more lengthy analysis of intangible property rights and privacy rights appears in Adam D. Moore *Intellectual Property and Information Control* (Transaction Pub. 2001); "Intangible Property: Privacy, Power, and Information Control" *American Philosophical Quarterly* 35 (Oct. 1998); "Toward A Lockean Theory of Intellectual Property" in *Intellectual Property:*

Moral, Legal, and International Dilemmas, ed. A. Moore (Rowman & Littlefield, 1997), chap. 5; and "Employee Monitoring and Computer Technology: Evaluative Surveillance v. Privacy" in *Business Ethics Quarterly* 10 (July 2000).

2. John Locke, *The Second Treatise of Government*, § 27 (italics mine).

3. This view is summed up nicely by Clark Wolf, "Contemporary Property Rights, Lockean Provisos, and the Interests of Future Generations," *Ethics* (July, 1995): pp. 791–818.

4. For similar views see, Rawls, *A Theory of Justice* (Cambridge, Mass.: Harvard University Press, 1971), chap. VII.; Aristotle, *Nicomachean Ethics*, bks. I and X; Kant, *The Fundamental Principles of The Metaphysics of Morals*, Academy Edition; Sidgwick, *Methods of Ethics*, 7th ed. (London, Macmillian, 1907); R. B. Perry, *General Theory of Value* (New York: Longmans, Green, 1926); and Loren Lomasky, *Persons, Rights, and the Moral Community* (New York: Oxford University Press, 1987).

5. Suppose Fred appropriates a grain of sand from an endless beach and paints a lovely, albeit small, picture on the surface. Ginger, who has excellent eyesight, likes Fred's grain of sand and snatches it away from him. On this interpretation of Locke's theory, Ginger has violated Fred's weak presumptive claim to the grain of sand. We may ask, "What legitimate reason could Ginger have for taking Fred's grain of sand rather than picking up her own grain of sand?" If Ginger has no comparable claim, then Fred's prima facie claim remains undefeated. An undefeated prima facie claim can be understood as a right. For a defense of this view of rights see G. Rainbolt, "Rights as Normative Constraints" (1993) *Philosophy and Phenomenological Research* 53 pp. 93–111, and Joel Feinberg, *Freedom and Fulfillment: Philosophical Essays* (Princeton, N.J. : Princeton University Press, 1992).

6. S. Warren, and L. Brandeis, "The Right to Privacy," *The Harvard Law Review* 4 (1890): pp. 193–220.

7. Roscoe Pound, "Interests in Personality," *Harvard Law Review* 28 (1915): p. 343, Paul A. Freund, "Privacy: One Concept or Many?" *Privacy Nomos XIII*, ed. J. Roland Pennock and John W. Chapman (Atherton Press, 1971), p. 182.

8. Alan Westin, *Privacy and Freedom* (New York: Atheneum, 1968); Adam D. Moore, *Intellectual Property and Information Control*.

9. *Eisenstadt v. Baird*, 405 U.S. 438 (1972): p. 453. See also Louis Henkin, "Privacy and Autonomy," *Columbia Law Review* 74 (1974): pp. 1410, 1425; Joel Feinberg, "Autonomy, Sovereignty, and Privacy: Moral Ideas in the Constitution?" *Notre Dame Law Review* 58 (1983): p. 445; Daniel R. Ortiz, "Privacy, Autonomy, and Consent," *Harvard Journal of Law and Public Policy* 12 (1989): p. 91; and H. Tristram Englehardt Jr., "Privacy and Limited Democracy," *Social Philosophy and Policy* 17 (Summer, 2000): pp. 120–140. "Three different senses of privacy . . . must be distinguished . . .: (1) freedom from unwanted observation or collection of information, (2) freedom from the disclosure of personal information without one's consent, and (3) freedom from unwarranted government intrusion." Englehardt, "Privacy and Limited Democracy," p. 123.

10. W. A. Parent, "Privacy, Morality, and the Law," *Philosophy and Public Affairs* 12 (Autumn 1983): p. 269.

11. For more about privacy rights see, Charles Fried, "Privacy," *Yale Law Journal* 77 (1968): p. 477; A. Westin and M. Baker, *Databanks in a Free Society* (New York: Quadrangle Press, 1972); J. Rachels, "Why Privacy is Important," *Philosophy and Public Affairs* 4 (Summer

1975): pp. 323–333; and Paul Weiss, *Privacy* (Carbondale, Ill.:Southern Illinois University Press, 1983). Arguably any plausible account of human well being or flourishing will have as a component a strong right to privacy. Controlling who has access to ourselves is an essential part of being a happy and free person. This may be why "peeping Toms" and rapists are held up as moral monsters—they cross a boundary that should never be crossed without consent.

12. Unesco's International Bioethics Committee has urged government regulation of all genetic research because the human genome is the common heritage of humanity. One view is that you may have the right to change your own genes but you may not make changes that will be inherited by future generations. "The draft Unesco resolution doesn't rule out somatic therapy, which alters the DNA only in mature cells. Germline therapy is the no-no, since it changes DNA in sperm or ova, and those changes will be passed on to every subsequent generation." Charles Platt "Evolution Revaluation" *Wired Magazine* (January 1997), p. 200.

13. A. John Simmons notes that Locke may be sympathetic with this view. A. John Simmons *The Lockean Theory of Rights* (Princeton, N.J.: Princeton University Press, 1992), p. 269.

> Locke himself uses examples that point to the social nature of production (*The Second Treatise of Government*, II 43). But if the skills, tools, or invention that are used in laboring are not simply the product of the individual's effort, but are instead the product of a culture or a society, should not the group have some claim on what individual laborers produce? For the labor that the individual invests includes the prior labor of many others.

14. See Robert Nozick, *Anarchy, State, and Utopia* (New York: Basic Books 1974), p. 178.

15. Lysander Spooner argued that one's culture or society plays almost no role in the production of ideas. "Nothing is, by its own essence and nature, more perfectly susceptible of exclusive appropriation, than a thought. It originates in the mind of a single individual. It can leave his mind only in obedience to his will. It dies with him, if he so elects." Lysander Spooner, *The Law of Intellectual Property*: or An Essay on the Right of Authors and Inventors to a Perpetual Property in Their Ideas, in *The Collected Works of Lysander Spooner*, edited by C. Shively (1971), p. 58.

16. "One cannot, whatever one's purposes, just act so as to give people benefits and then demand (or seize) payment. Nor can a group of persons do this. If you may not charge and collect for benefits you bestow without prior agreement, you certainly may not do so for benefits whose bestowal costs you nothing, and most certainly people need not repay you for costless-to-provide benefits which yet *others* provided them. So the fact that we partially are 'social products' in that we benefit from current patterns and forms created by the multitudinous actions of a long string of long-forgotten people, forms which include institutions, ways of doing things, and language, . . . does not create in us a general free floating debt which the current society can collect and use as it will." Nozick, *Anarchy*, p. 95.

17. Lysander Spooner puts the point succinctly. "*What* rights society have, in ideas, which they did not produce, and have never purchased, it would probably be very difficult to define; and equally difficult to explain *how* society became possessed of those rights. It certainly requires something more than assertion, to prove that by simply coming to a knowledge of certain ideas—the products of individual labor—society acquires any valid title to them, or, consequently, any *rights* in them." Spooner, *The Law of Intellectual Property*, p. 103.

18. Council For Responsible Genetics, Human Genetics Committee (Fall, 1992). T. Beauchamp and L. Waters, *Bioethics*, 4th ed. (Wadsworth, 1194), p. 67.